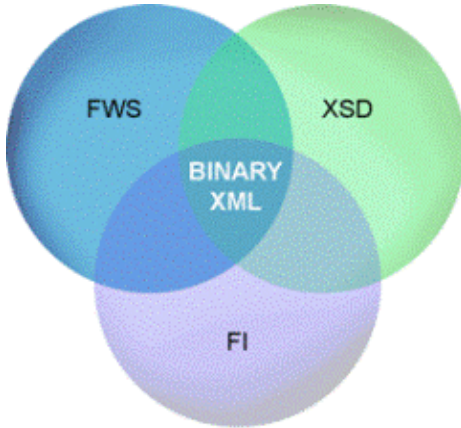


Binary XML Solutions

OSS Nokalva, Inc.

SOLUTIONS FOR OPTIMIZED
XML & WEB SERVICES



3 BINARY XML SOLUTIONS
ONE IS RIGHT FOR YOU

The **OSS XSD Tools**, available for C, C++, and Java, bind your XSD schema to C/C++, or Java representations. Runtime libraries provide fast encoding of messages into highly compact binary data or traditional XML documents.

The **OSS Fast Web Services Tools**, available for C, and Java, are perfect for supporting Web Services in resource or bandwidth constrained environments. Traditional XML SOAP message are supported.

The **OSS Fast Infoset Tools**, available for C, deliver fast, compact, standards-based XML, without an XML schema. These tools are fully interoperable with Sun's Glassfish Fast Infoset Java implementation.

Are performance and bandwidth problems affecting you XML deployment?

A popular platform with many advantages, XML presents several problems when deploying in bandwidth or resource-constrained environments. On average, XML requires 10 times more bandwidth than a binary representation. Common compression solutions such as gzip reduce size, but increase processing costs. Web Services applications, which are heavily dependent on XML based messaging, can be especially vulnerable to XML related problems.

Now you can take advantage of two complementary, proven technologies – XML and binary encoding. The **OSS Binary XML Solutions** optimize your XML and Web Services applications, reducing the size related costs associated with the transmission, parsing, and serialization of XML documents. Reduce costs without losing XML's many benefits such as inherent self-description and interoperability.

The OSS Binary XML Solutions for Java, C, and C++, based on international standards, are designed to be deployed without disrupting existing applications. Optimize your applications, while protecting your investment.

Flexible solutions for your business needs

OSS XSD TOOLS

The **OSS XSD Tools** deliver binary encodings from an XSD specification. The OSS XSD Tools bind your XSD Schema to C/C++ or Java representations. Runtime libraries provide fast encoding of values of these representations into highly compact binary or XML encodings. Using standard, proven, binary encoding rules we can achieve better speeds and size of compaction than commonly used compression algorithms. Decoders provide validation of incoming XML documents, and fast transformation of those documents to values of the C/C++ representations. The OSS XSD Tools for C/C++ and Java adhere to the W3C XML Schema and ITU-T X.694 standards.

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Why choose OSS Nokalva?

OSS is the supplier chosen by the most demanding organizations worldwide because we do not deliver just software – we deliver our expertise.

- OSS delivers **reliability**. We have developed a robust software testing methodology that is applied to every one of our products. All software is subject to extensive automated testing that is repeated daily, not only for new products but also for existing ones, so as to ensure that code changes never introduce errors.
- OSS delivers **experience**. We know how to write high-quality code that can be safely ported to any existing software/hardware platform, and we have completed hundreds of such portings ourselves. Our ASN.1 codec libraries are already available on over 250 platforms, and this number steadily increases.
- OSS delivers **performance**. We know how to write code that runs fast on any computing device, including embedded systems, making optimum use of the available computing resources.

Complementary Products

ASN.1->XSD converts your ASN.1 specification into an XSD schema that can be used by XSD applications to exchange XML messages with ASN.1 applications.

XSD->ASN.1 converts your XSD schema into equivalent ASN.1 specs. All XML documents conforming to the original XSD would be valid XML encodings of the generated ASN.1.

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| | XSD schema available | | | XSD schema not available | |
|-------------------|----------------------|------------|-----------------------|--------------------------|-----------------------|
| | ASN.1 (binary) | XML (text) | Fast Infoset (binary) | XML (text) | Fast Infoset (binary) |
| XSD Tool | EXCELLENT | FAIR | - | - | - |
| Fast WS Tool | EXCELLENT | FAIR | GOOD | - | - |
| Fast Infoset Tool | - | FAIR | GOOD | FAIR | GOOD |

◀ ENCODINGS

Which Binary XML Solution is right for me? Use the table to choose the XML product that suits you best, based on the encoding used and performance (expressed as both the encoding size and the speed of the encoding process).

OSS FAST WEB SERVICES TOOLS

The **OSS Fast Web Services (FWS) Tools** for C/C++ and Java create highly efficient binary (PER-encoded) SOAP messages, are conformant to the W3C WSDL 1.1, SOAP 1.1 and 1.2, WS-I Basic Profile 1.0, and ITU-T X.892 | ISO/IEC 24824-2 Fast Web Services recommendations. Traditional XML-SOAP messages are supported ensuring your ability to exchange SOAP messages with XM peers.

OSS FAST INFOSET TOOLS

The **OSS Fast Infoset (FI) Tools** for C/C++ are for those who wish to support non-schema-based XML messages in resource-constrained and/or bandwidth-constrained environments and need to minimize to the overhead associated with using XML. The OSS FI Tools offer significant performance improvements without requiring any XML schema. Using the FI Tools to process Fast Infoset, rather than traditional XML, results in messages averaging 3 times smaller and processing speeds averaging 5 times faster.

The OSS Fast Infoset (FI) Tools enable you to represent and transmit your XML more efficiently by utilizing the Fast Infoset encodings. Runtime API functions create and process Fast Infoset documents and perform lossless transformations between standard XML and optimized Fast Infoset representations of XML documents. Use our SAX-like decoder to parse Fast Infoset encodings as if your traditional SAX parser were reading the XML document corresponding to the Fast Infoset binary data. Choose XML or binary as needed, using a single tool.

With interoperable implementations already available on several platforms such as Microsoft .NET and .NET CF, Sun GlassFish, BEA WebLogic, IBM SDK for Java, TMax Soft JEUS 6, as well as Linux, Solaris, and Win32, Fast Infoset offers a standards-based, reliable alternative to XML that can be widely deployed today.